

FIG. 20 is a block diagram of a market hub with head ends for channel probe management in an example of the invention.

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5 FIG. 21 is a flow chart of a channel probe management system in an example of the invention.

FIG. 22 is a block diagram of a remote monitoring (RMON) system in the prior art.

10 FIG. 23 is a block diagram of a market hub with an RMON system in an example of the invention.

FIG. 24 is a flow chart of the RMON interface system in an example of the invention.

FIG. 25 is a flow chart of a market performance management system in an example of the invention.

15 FIG. 26 is a flow chart of a market performance management system with monitoring performance information in an example of the invention.

FIG. 27 is a map of web pages of a performance management system in an example of the invention.

20 FIG. 28 is a flow chart of a market performance management system for polling all probes in an example of the invention.

FIG. 29 is a flow chart of a market performance management system with an HTML fragment repository in an example of the invention.

FIG. 30 is a flow chart of a market performance management system for real-time polling of a probe in an example of the invention.

25 FIG. 31 is a national headquarter web page in an example of the invention.

FIG. 32 is a market web page in an example of the invention.

FIG. 33 is a Cyber Manager status web page in an example of the invention.

30 FIG. 34 is a forward error correction (FEC) summary web page in an example of the invention.

FIG. 35 is a FEC channel web page in an example of the invention.

FIG. 36 is a signal to noise (SNR) summary web page in an example of the invention.

FIG. 37 is a peak/load capacity web page in an example of the invention.

5 FIG. 38 is a Hybrid System Management Protocol query web page in an example of the invention.

FIG. 39 is a hybrid probe web page in an example of the invention.

FIG. 40 is a top talker web page in an example of the invention.

10 FIG. 41 is detail information of a top talker web page in an example of the invention.

FIG. 42 is a bits per second web page for a NetScout statistics page in an example of the invention.

15 FIG. 43 is protocol information for a NetScout statistics page in an example of the invention.

FIG. 44 is a Multi Router Traffic Grapher (MRTG) web page in an example of the invention.

FIG. 45 is a sector probe web page in an example of the invention.

FIG. 46 is a sector probe web page in an example of the invention.

20 FIG. 47a is a key performance indicator web page in an example of the invention.

FIG. 47b is a key performance indicator web page in an example of the invention.

FIG. 48 depicts a SIF web page in an example of the invention.

25 DETAILED DESCRIPTION OF THE INVENTION

Broadband Wireless System -- FIGS. 1-6

FIGS. 1-6 depict a specific example of a broadband wireless system in accord with the present invention. Those skilled in the art will appreciate 30 numerous variations from this example that do not depart from the scope of the invention. Those skilled in the art will also appreciate that various features

described below could be combined with other embodiments to form multiple variations of the invention. Those skilled in the art will appreciate that some conventional aspects of FIGS. 1-6 have been simplified or omitted for clarity.

FIG. 1 is a block diagram that illustrates a broadband wireless system 100 in an example of the invention. The broadband wireless system 100 is comprised of a national data center 110, an operations network 115, an enterprise network 120, a national operations center 200, a national operations center 210, an Internet 145, a regional aggregation point 300, a regional aggregation point 310, a market hub 400, a head end 500, a head end 510, a market hub/head end 520, and customer premises 600, 610, and 620.

The national data center 110 is configured to compile and display network information for the broadband wireless system 100. Network information is data that can be evaluated to operate communication network, including performance information, fault information, billing information, and customer information. The operations network 115 is configured to process billing information, customer information, product ordering information, and another information generated from the broadband wireless system 100. The enterprise network 120 is an internal employee network configured to provide certain employees access to the network information for the broadband wireless system 100. The national operations center 200 is configured to route data within the broadband wireless system 100, collect network information for the broadband wireless system 100, and store the network information. The national operations center 200 is discussed in further detail in FIG. 2. The regional aggregation point 300 is configured to route data within the broadband wireless system 100, collect network information for the broadband wireless system 100, and store the network information. The regional aggregation point 300 is discussed in further detail in FIG. 3. The market hub 400 is configured to route data within the broadband wireless system 100, collect network information for the broadband wireless system 100, and store the network information. The market hub 400 is discussed in further detail in FIG. 4. The head end 500 is configured to communicate with a customer premises over a wireless link and collect network